

## **MONTANA FISH, WILDLIFE & PARKS FINAL PERFORMANCE REPORT**

**STATE:** MONTANA  
**GRANT TITLE:** Loon Ecology Project  
**AGREEMENT:** T - 10 - 1  
**PERIOD COVERED:** June 12, 2003 through December 31, 2005

### **Objective**

The objective of this project is to determine habitat and population characteristics for common loons in northwest Montana, outside of Glacier National Park. This information will be used in the development of a loon conservation plan for Montana.

### **Location**

The project was conducted within northwest Montana from the Blackfoot and Clearwater drainages west to the Idaho border and north to the Canada border. Work did not include surveys of lakes within Glacier National Park. Surveys in Glacier are primarily conducted by Park staff.

### **Accomplishments**

- Collected data on nesting success and chick survival rates from approximately 35 core loon nesting lakes in the study area.
- Captured and banded a total of 46 adults and 78 juvenile common loons since June 30, 2003 for a total of 108 newly banded birds in the population over 2 years.
- Collected habitat data from nest sites, lake, and landscape scales for analyses including factors such as lake physical characteristics, distance to other loon territories and disturbance.
- Sent biological samples (blood, feathers, and eggs) to BioDiversity Research Institute (BRI), Gorham ME, a non-profit research group focused on avian conservation and aquatic toxicology (<http://www.briloon.org>). This organization has been investigating common loons and other higher trophic level piscivorous wildlife as vital indications of aquatic integrity for many years. Chemical results indicate overall that methyl mercury levels in Montana common loons are higher than levels observed in loons breeding elsewhere in northwestern U.S. but remain at levels considered not to have an impact on reproductive success and survival (Report BRI 2004-09).
- Obtained at least 4 re-sights/recoveries on Montana's adult or juvenile loons through cooperation with companion studies in Washington and California. One adult female banded in 1997 was observed during winter 2004-2005 in Moro Bay, CA. She returned to Montana in less than 5 days after leaving CA to nest on Lower Stillwater Lake in 2005.

## **Discussion**

Due to the longevity of common loons and the time it takes to obtain recruitment rates of juvenile loons (they do not return to Montana until they are 3 years old), a second phase of the study was added. In addition, we expanded the study to include radio-telemetry of common loons staging on Flathead Lake to better understand migration and winter habitats. Therefore, some of the population and migration information will not be available until after phase 2 is completed.

So far, data have indicated that the most important factors affecting nest success are territory type and some of the lake factors, such as perimeter. The factors affecting chick survival include territory type as well as proximity to other nesting loons, water level fluctuations, and some disturbance variables such as number of angler days. Final results from phase 1 will be available in the form of a master's thesis through MSU, which will be completed in May 2006. A copy will be submitted to the FWS for inclusion in the grant's file at that time.

## **Variances**

None to report.

## **Expenditure Recap:**

Proposed:

	Federal Share		Match		Total
Direct Costs	57,780.00		23,112.00		80,892.00
Indirect Costs	11,556.00				11,556.00
Total	69,336.00	75.0%	23,112.00	25.0%	92,448.00

Final Expenditures:

	Federal Share		Match		Total
Direct Costs	58,596.75		23,112.00		81,708.75
Indirect Costs	10,739.25				10,739.25
Total	69,336.00	75.0%	23,112.00	25.0%	92,448.00

Non-federal match requirement was met by cash contributions from state agencies, private companies, and the Montana Loon Society (\$22,707), and in-kind donations of volunteer time and mileage (\$26,803.26) for a total of \$49,510.26.

The required 25% state match (\$23,112.00) was over-matched by \$26,398.26. See the attached Financial Status Report for additional details.

## **Project Personnel**

<b>Name</b>	<b>Title</b>	<b>Phone</b>	<b>Email</b>
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